

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please cancel claim 32 without prejudice or disclaimer.

Please rewrite claims 1, 16 and 31, and add new claim 33 as follows:

Listing of Claims:

1. (currently amended) A display device comprising an actuator substrate having an actuator element, an optical waveguide plate, a crosspiece intervening between said optical waveguide plate and said actuator substrate and surrounding said actuator element, and a picture element assembly joined onto said actuator element, wherein:

light propagates within said optical waveguide plate, and said picture element assembly, in a state of no load, is disposed closely to or contacts said optical waveguide plate so as to cause light to be emitted from the optical waveguide plate.

2. (original) The display device according to claim 1, wherein a distance between said picture element assembly and said optical waveguide plate in said state of no load is not more than 30 % of a distance of separation between said picture element assembly and said optical waveguide plate in a driving state.

3. (cancelled)

4. (previously presented) A display device comprising an actuator substrate having an actuator element, an optical waveguide plate, a crosspiece intervening between said optical waveguide plate and said actuator substrate and surrounding said actuator element, and a picture element assembly joined onto said actuator element, wherein:

said picture element assembly, in a state of no load, is in pressed contact with said optical waveguide plate so as to cause light to be emitted from the optical waveguide plate.

5. (previously presented) The display device according to claim 4, wherein said picture element assembly is in said pressed contact with said optical waveguide plate by being urged toward said optical waveguide plate due to the elasticity of a thin-walled section of said actuator substrate when said actuator element is in said state of no load.

6. (previously presented) A method for producing a display device, comprising:
a step of forming a crosspiece precursor for surrounding an actuator element on any one of an optical waveguide plate and an actuator substrate having said actuator element;
a step of forming a picture element assembly precursor on any one of said actuator element and said optical waveguide plate;
a step of joining said actuator substrate and said optical waveguide plate to one another by the aid of said picture element assembly precursor and any one of said crosspiece precursor and a crosspiece formed by hardening said crosspiece precursor;
a step of hardening said picture element assembly precursor on said actuator element to form a picture element assembly; and
a step of hardening said crosspiece precursor to form said crosspiece, wherein:
when said step of hardening said picture element assembly precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly precursor abuts against said optical waveguide plate.

7. (original) The method for producing said display device according to claim 6, wherein said step of hardening said crosspiece precursor is carried out prior to said step of hardening said picture element assembly precursor.

8. (original) The method for producing said display device according to claim 6, wherein said picture element assembly precursor, which is formed on said optical waveguide plate in said step of forming said picture element assembly precursor, is joined onto said actuator element in said joining step.

9. (original) The method for producing said display device according to claim 6, wherein said actuator element is displaced by applying a voltage to said actuator element.

10. (previously presented) The method for producing said display device according to claim 6, further comprising:

performing a step of applying an adhesive to any one of said crosspiece precursor, said crosspiece, said actuator substrate, said optical waveguide plate, and a light-shielding layer formed on said optical waveguide plate, wherein:

said actuator substrate and said optical waveguide plate are joined to one another by the aid of any one of said crosspiece precursor and said crosspiece, and any one of said picture element assembly precursor and said picture element assembly by hardening said adhesive.

11. (original) The method for producing said display device according to claim 6, further comprising:

performing a step of removing any organic matter adhered to a surface of said optical waveguide plate prior to said joining step.

12. (previously presented) A method for producing a display device, comprising:

a step of forming a picture element assembly precursor on an actuator element supported by an actuator substrate;

a step of forming a crosspiece precursor for surrounding said actuator element on any one of said actuator substrate and an optical waveguide plate;

a step of joining said substrate and said optical waveguide plate to one another by the aid of said crosspiece precursor and any one of said picture element assembly precursor and said picture element assembly formed by hardening said picture element assembly precursor;

a step of hardening said picture element assembly precursor to form said picture element assembly; and

a step of hardening said crosspiece precursor to form a crosspiece, wherein:

said picture element assembly is in pressed contact with said optical waveguide plate in accordance with shrinkage caused by hardening of said crosspiece precursor.

13. (previously presented) The method for producing said display device according to claim 12, wherein when said step of hardening said picture element assembly precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly precursor abuts against said optical waveguide plate.

14. (previously presented) The method for producing said display device according to claim 12, wherein when said step of hardening said crosspiece precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly abuts against said optical waveguide plate.

15. (original) The method for producing said display device according to claim 13, wherein said actuator element is displaced by applying a voltage to said actuator element.

16. (currently amended) A method for producing a display device, comprising:
a step of forming a crosspiece precursor for surrounding an actuator element on any one of an optical waveguide plate and an actuator substrate having said actuator element;
a step of forming a picture element assembly precursor on said optical waveguide plate;
a step of joining said actuator substrate and said optical waveguide plate to one another by the aid of said crosspiece precursor and said picture element assembly precursor, and arranging said picture element assembly precursor on said actuator element;
a step of hardening said picture element assembly precursor on said actuator element to form a picture element assembly; and
a step of hardening said crosspiece precursor to form a crosspiece, wherein:
said picture element assembly is in pressed contact with said optical waveguide plate in accordance with shrinkage caused by hardening of said crosspiece precursor.

17. (previously presented) The method for producing said display device according to claim 16, wherein when said step of hardening said picture element assembly precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly precursor abuts against said optical waveguide plate.

18. (previously presented) The method for producing said display device according to claim 16, wherein when said step of hardening said crosspiece precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly abuts against said optical waveguide plate.

19. (original) The method for producing said display device according to claim 17, wherein said actuator element is displaced by applying a voltage to said actuator element.

20. (previously presented) The method for producing said display device according to claim 16, further comprising:

performing a step of applying an adhesive to any one of said crosspiece precursor, said crosspiece, said actuator substrate, said optical waveguide plate, and a light-shielding layer formed on said optical waveguide plate, wherein:

said actuator substrate and said optical waveguide plate are joined to one another by the aid of any one of said crosspiece precursor and said crosspiece, and any one of said picture element assembly precursor and said picture element assembly by hardening said adhesive.

21. (original) The method for producing said display device according to claim 16, further comprising:

performing a step of removing any organic matter adhered to a surface of said optical waveguide plate prior to said joining step.

22. (original) A method for producing a display device, comprising:

a step of forming a crosspiece for surrounding an actuator element on any one of an optical waveguide plate and an actuator substrate having said actuator element;

a step of forming a picture element assembly precursor on any one of said actuator element and said optical waveguide plate;

a step of joining said optical waveguide plate and said actuator substrate to one another by the aid of said crosspiece and said picture element assembly precursor; and

a step of hardening said picture element assembly precursor on said actuator element to form a picture element assembly, wherein:

when said step of hardening said picture element assembly precursor is carried out, hardening is performed in a state in which said actuator element is displaced, and said picture element assembly precursor abuts against said optical waveguide plate.

23. (original) The method for producing said display device according to claim 22, wherein said picture element assembly precursor, which is formed on said optical waveguide plate in said step of forming said picture element assembly precursor, is joined onto said actuator element in said joining step.

24. (original) The method for producing said display device according to claim 22, wherein said actuator element is displaced by applying a voltage to said actuator element.

25. (previously presented) The method for producing said display device according to claim 22, further comprising:

performing a step of applying an adhesive to any one of said crosspiece precursor, said crosspiece, said actuator substrate, said optical waveguide plate, and a light-shielding layer formed on said optical waveguide plate, wherein:

said actuator substrate and said optical waveguide plate are joined to one another by the aid of any one of said crosspiece precursor and said crosspiece, and any one of said picture element assembly precursor and said picture element assembly by hardening said adhesive.

26. (original) The method for producing said display device according to claim 22, further comprising:

performing a step of removing any organic matter adhered to a surface of said optical waveguide plate prior to said joining step.

27. (previously presented) A method for producing a display device, comprising:
- a step of forming a first precursor of a first part of a picture element assembly on an actuator element supported by an actuator substrate, said first precursor being hardened to form said first part of said picture element assembly;
 - a step of forming a crosspiece precursor for surrounding said actuator element on said actuator substrate;
 - a step of defining an upper surface of said crosspiece precursor, and then hardening said crosspiece precursor to form a crosspiece;
 - a step of forming a second precursor of a second part of said picture element assembly on said first part of said picture element assembly on said actuator substrate;
 - a step of joining an optical waveguide plate and said actuator substrate to one another by the aid of said crosspiece and said first and second picture element assembly precursors;
 - and
 - a step of hardening said second precursor of said second part of said picture element assembly on said actuator element to form said picture element assembly.

28. (original) The method for producing said display device according to claim 27, wherein in said step of forming said crosspiece, said crosspiece precursor is hardened in a state in which said part of said picture element assembly abuts against a figuring plate member.

29. (previously presented) The method for producing said display device according to claim 27, further comprising:
- performing a step of applying an adhesive to any one of said crosspiece precursor, said crosspiece, said actuator substrate, said optical waveguide plate, and a light-shielding layer formed on said optical waveguide plate, wherein:
 - said actuator substrate and said optical waveguide plate are joined to one another by

the aid of any one of said crosspiece precursor and said crosspiece, and any one of said picture element assembly precursor and said picture element assembly by hardening said adhesive.

30. (original) The method for producing said display device according to claim 27, further comprising:

performing a step of removing any organic matter adhered to a surface of said optical waveguide plate prior to said joining step.

31. (currently amended) A display device comprising an actuator substrate having an actuator element, an optical waveguide plate, a crosspiece intervening between said optical waveguide plate and said actuator substrate and surrounding said actuator element, and a picture element assembly joined onto said actuator element, wherein:

said picture element assembly and said optical waveguide plate are brought into pressed contact with one another when a voltage is applied having a polarity opposite to that of a voltage to be applied to said actuator element to separate said picture element assembly from said optical waveguide plate, and

a distance between said picture element assembly and said optical waveguide plate in a state of no load is not more than 30 % of a distance of separation between said picture element assembly and said optical waveguide plate in a driving state.

32. (cancelled)

33. (new) The display device according to claim 2, wherein said light propagates through said optical waveguide plate in a direction perpendicular to the displacement direction of said actuator element.